

Applicant(s): Wong Song, *et al.*
Application No.: 10/690,105

Amendments to the Specification

Please replace the paragraph at page 4 lines 11 through 16 with the following rewritten paragraph:

The pattern pitch $P[[']]$ of the mesa or trench pattern is determined by the formula,

$$P' = P / (2n[[']]+1) \quad (n[[']]: \text{natural number}),$$

wherein $P \sin \theta = n \lambda$, P : pitch between unit marks, λ : wave length of laser beam, θ : diffraction angle, $n[[']]$: the number of mesa or trench patterns, n : diffraction order of unit mark, $\lambda[[']]$: wave length of different laser beam for illuminating the mesa or trench patterns, $2n[[']]+1$: diffraction order by the wave length $\lambda[[']]$ of different lasers.

Please replace the paragraph at page 4 line 17 through page 5 line 1, with the following rewritten paragraph:

In addition, in one embodiment, when the pitch P between the unit marks is in the range of 7.9 to $8.2 \mu\text{m}$, the pattern width $t[[']]$ and pattern pitch $P[[']]$ of the mesa or trench patterns are formed in the range of 2.65 - $2.67 \mu\text{m}$ and in the range of 5 - $5.4 \mu\text{m}$, respectively, when the diffraction order $2n[[']]+1$ is 3. The pattern width $t[[']]$ and pattern pitch $P[[']]$ of the mesa or trench patterns can be formed in the range of 1.59 - $1.61 \mu\text{m}$ and in the range of 3.1 - $3.3 \mu\text{m}$, respectively, when the diffraction order $2n[[']]+1$ is 5. The pattern width $t[[']]$ and pattern pitch $P[[']]$ of the mesa or trench patterns are formed in the range of 1.13 - $1.15 \mu\text{m}$ and in the range of 2.27 - $2.29 \mu\text{m}$, respectively, when the diffraction order $2n[[']]+1$ is 7.

Please replace the paragraph at page 8 line 19 through page 9 line 1 with the following rewritten paragraph:

Applicant(s): Wong Song, *et al.*
Application No.: 10/690,105

The pattern pitch $P[n]$ of the mesa or trench pattern is determined by the formula,
 $P' = P / (2n[n] + 1) \pm 0.05 \mu\text{m}$ ($n[n]$: natural number),

wherein $P \sin \theta = n \lambda$, P : pitch between unit marks, λ : wavelength of laser beam, θ :
diffraction angle, $n[n]$: the number of mesa or trench patterns, n : diffraction order of unit mark,
 λ' : wavelength of the second probing beam for illuminating the mesa or trench patterns, $2n[n] + 1$:
diffraction order by the wavelength $\lambda[n]$ of different lasers.

Please replace the paragraph at page 9 lines 2 through 9 with the following rewritten
paragraph:

In addition, when the pitch P between the unit marks is in the range of 7.9 to 8.2 μm , the
pattern width $t[n]$ and pattern pitch $P[n]$ of the mesa pattern M or trench pattern T are formed
in the range of 2.65 - 2.67 μm and in the range of 5 - 5.4 μm , respectively, in case that the
diffraction order $2n[n] + 1$ is 3; the pattern width $t[n]$ and pattern pitch $P[n]$ of the mesa or
trench patterns are formed in the range of 1.59 - 1.61 μm and in the range of 3.1 - 3.3 μm ,
respectively, in case that the diffraction order $2n[n] + 1$ is 5; and the pattern width $t[n]$ and
pattern pitch $P[n]$ of the mesa or trench patterns are formed in the range of 1.13 - 1.15 μm and
in the range of 2.27 - 2.29 μm , respectively, in case that the diffraction order $2n[n] + 1$ is 7.

Please replace the paragraph at page 9 lines 10 through 14 with the following rewritten
paragraph:

Accordingly, if each of the unit marks as shown in FIG. 8A through 9B is illuminated
with the first probing beam, each of the contrast values is detected as shown in the graphs of
FIGS. 10 to 10C. In addition, if each of the unit marks is illuminated with the second probing
beam, each of the contrast values of the mesa pattern M or trench pattern T can be detected as

Applicant(s): Wong Song, *et al.*
Application No.: 10/690,105

shown in the graphs of FIGS. 11A to 11C.